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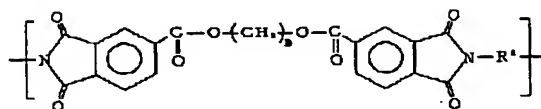
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APPLICANT : HITACHI CHEM CO LTD;

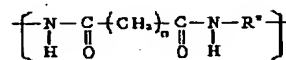
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TITLE : POLYESTER-AMIDE-IMIDE RESIN, ITS
PRECURSOR AND THEIR
PRODUCTION



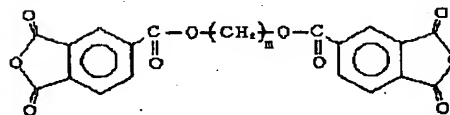
I



II



III



IV

ABSTRACT : PROBLEM TO BE SOLVED: To obtain an essentially thermoplastic polyester-amide-imide resin excellent in heat resistance and solvent solubility, desirable as a die bonding agent and capable of low temperature processing by cyclizing a precursor being a reaction product of a polyamide obtained from a specified dicarboxylic acid and a diamine with a specified tetracarboxylic acid dianhydride and a diamine into an imide.

SOLUTION: This resin contains 40-90mol%, based on the total repeating units, repeating units of formula I and 5-20mol% repeating units of formula II. In the formulas, R¹ and R² are each an organic group; m is 2-20; and n is 4-12.

The units of formula II contribute to the improvement of solvent solubility and the lowering of a glass transition temperature and improve the reflow crack resistance and adhesion of a semiconductor adhesive. This imide is obtained by cyclizing a precursor obtained by reacting a polyamide obtained from a dicarboxylic acid of formula II and a diamine with a tetracarboxylic acid dianhydride of formula IV and a diamine into an imide. In the formulas, n is 4-12; R¹ is a divalent organic group; and m is 2-20.

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